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PRINCIPLES OF EUGENICS

BLANCHE EAMES

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PRINCIPLES OF EUGENICS

PRINCIPLES OF EUGENICS

A Practical Treatise

BY

BLANCHE EAMES

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To

MARY E. TEATS

A pioneer worker in Eugenics and one to whom young people throughout the country are indebted for instruction and inspiration on the subject of Intelligent Parenthood.

PREFACE

WHILE it is true that "Of making many books there is no end," yet if a person believes that by adding to the number, knowledge on some important subject will be more widely disseminated, no other reason need be given for writing a book and sending it out to the public.

The exigencies of the times demand that the sex problem be no longer withheld from general discussion. The Social Evil and the White Slave Traffic have brought the question to the front; and since it is here, why should it not be considered from a sacred and scientific standpoint, and in the same spirit of fairness and frankness with which other subjects are discussed?

Various organizations in this country and other lands are taking up Eugenic work. A few progressive States and a large number of prominent cities of the United States have formed Societies of Social Hygiene, the main purpose being to disseminate knowledge which will enable young people to safeguard themselves against the temptations to which they are exposed. A number of Normal Schools, Colleges and Universities are giving instruction along this line; also many Parent-Teacher Clubs, through lectures in Public Schools, are receiving knowledge that assists them in properly teaching the children under their care.

Also there is an increasing sentiment in favor of safe-

guarding future generations, and much discussion is being carried on as to what can best be done to prevent the birth of so many degenerates. The Eugenics Education Society, of London, England, through its official organ, *The Eugenics Review,* and in other ways, is seeking to enlighten the public concerning the ill results of improper marriages. The Eugenic Section of the American Genetic Association is making a systematic investigation to ascertain what physical and mental traits are transmissible. And the Correspondence School of Gospel and Scientific Eugenics is educating young people concerning some of the vital laws regarding life and procreation, in order that they may become intelligent parents of superior offspring.

Coming in contact daily with people whose ideas concerning parenthood are no different from those of their grandparents decades ago—whose opinions, however, on other subjects have kept pace with the progress of the times—the author has felt impelled to state briefly, and prove as clearly as possible, some of the principles relating to development in the human race. Many a reader will question the statements contained herein, perhaps saying that they are wholly without foundation and visionary. However, in his search after truth, if he will bring to the subject an unprejudiced mind; if he will make a thorough study from the best scientific authorities (many of whom are quoted herein) of the laws of procreation, of the inheritance of innate and acquired characteristics, and of gestative influence; if he will do some original and independent thinking, making careful and extended observations as to how the laws apply in actual life; if he will do

these things, we will not fear what the results will be, for the principles of Eugenics not only can stand the test of the criticism of the fair-minded, intelligent inquirer, but are best revealed by such careful and patient investigation. Therefore, if this book brings forth criticism, but with the criticism, honest inquiry and search after truth, it will have fulfilled its mission, and the author will feel that somewhat of good has been accomplished.

CONTENTS

CHAPTER		PAGE
I.	REPRODUCTION. The Question, "What is Life?"—God Its Author—Life from Life—Like Tends to Beget Like—Attributes of Life—Reproduction in Simplest Forms of Life—Universal Law of Reproduction—Beneficent Effects of Law.....	13
II.	HEREDITY. Nature Selecting Parents—Artificial Selection—Work at the Illinois Agricultural Experiment Station—Luther Burbank's Improvements and Creations among Plants—Evolution in Animals—Heredity in the Human Race—The Edwards Family—The "Hill Folk"—Increase of Degeneracy—Necessity for Action.....	21
III.	RACE POISONS. Search for Happiness in Self-Indulgence—Experiments on Animals with Alcohol—Dr. MacNicholl's Investigations—Intemperance Frequent Cause of Insanity—Relation to Crime and Prostitution—Kaiser Wilhelm a Total Abstainer—No Justification for Liquor Traffic—Social Diseases and Their Effect on Posterity—The Dwarfed, Epileptic, Imbecile—Blindness, Sterility, Deaths of Infants.....	33
IV.	INSTRUCTION IN SEX TRUTHS. Curiosity in the Child and How Usually Answered—Prudery of Parents—Information Given by Playmates—Consequences in Childhood and Later Life—Agencies at Work to Instruct Young People—How the Parent Can Teach the Child—Proper Playmates—Interesting Occupation for the Child	44
V.	TOBACCO AND DRUGS. Nicotine a Poison—Causes Abnormal Thirst, Impaired Memory, Inability to Concentration of Mind—Produces Eye Difficulties—Effect of Tobacco Dust on Workers in Tobacco Factories—Probable Cause of Many Fœtal Deaths—Experiments That Might Be Per-	

CHAPTER PAGE

formed—Effect of Drugs on Posterity—Probable Cause of Feeble-Mindedness and Epilepsy — Bayer's Investigations — Fœticide—Who is Responsible? 51

VI. PRENATAL NUTRITION AND ENVIRONMENT. Teach the Child's Grandsire —Transmission of Acquired Characteristics—Germ Plasm Nourished by Blood of Individual — Experiment on Silkworms —Effects of Non-use of Organs—Thoughts Build the Psychic—Blood and Life Forces Go to Exercised Brain Cells —Prof. Gates's Experiments on Guinea Pigs —Statements of Spencer, Dr. David Starr Jordan, Ribot, Burbank — Characteristics in Brothers and Sisters—Variation Due to Different Thought—Life of Parents—How Non-transmission of Mutilations May Be Explained—Influence of Emotions on Blood, Hence on Germ Cells 63

VII. PRENATAL NUTRITION AND ENVIRONMENT, Continued. Power of Maternal Impressions Practically Demonstrated—"Science is Human Experience Tested and Set in Order"—Instances in Animal Life —"Wireless Telegraphy of Ante-natal Life"—Rapid Growth Before Birth—Evil Emotions Poison Mother's Blood—"Marking" the Child—Why Not Believed in and Upheld—How the Mother Can Affect the Mentality and Character of the Unborn Child—The Father's Influence at This Time 73

VIII. CONTINENCE. Human Race "Lame, Halt, and Blind"—Animals Strong and Vigorous —Conserve Life Forces—Most Prolific Animals Short-lived—Wasting of Life Forces All Down the Ages—Privilege to Rise Above Perverted Instincts—Statements of Burbank, Dr. Morrow, Dr. Hodge, Dr. G. Stanley Hall, Havelock Ellis—"What One is, Why May Not Millions Be?" 83

Principles of Eugenics

CHAPTER I

REPRODUCTION

"My heart is awed within me when I think
Of the great miracle that still goes on
In silence round me—the perpetual work
Of Thy creation, finished yet renewed forever."
—*W. C. Bryant.*

THE study of life is a fascinating one. The child, the old man, the fool, the sage, all alike ask the question, "What is life?" They seek an answer from the grass, the trees, the flowers, exclaiming with the poet:

"Flower of the crannied wall,
I pluck you out of the crannies,
I hold you here, root and all, in my hand,
Little flower—but if I could understand
What you are, root and all, and all in all,
I should know what God and man is."
—*Tennyson.*

They try to wrest the secret from the amœba, the grasshopper, the bird. But the wise little creatures keep their own counsel in the matter, for, although they tell many things about life, they will not reveal what it really is.

Finally the questioner turns to the pages of Holy Writ. Even there he does not find a complete solution of the problem, although he knows that what is contained therein is truth, and that the Word is authority from which there is no appeal. Science and the Scriptures, rightly interpreted, never conflict; they can not, because they are both the work of God; one His expression in Nature, the other in His written word. He learns that God created every living thing that moveth, after his kind; that He "created man in His own image"; that He "breathed into his nostrils the breath of life, and man became a living soul."

God, therefore, was the author of all life at its beginning, and ever since that time life has been springing from life. Not many centuries ago naturalists thought that some animals were spontaneously generated; for instance, that from decaying meat, maggots sprang forth which developed into flesh flies. It was formerly believed that animalcules arose by abiogenesis (spontaneous generation) in stagnant water or organic liquids. To ascertain whether or not this was true, experiments were performed in sterilizing liquids so as to kill all living organisms contained therein, then putting the liquid into a sterilized glass, and keeping it free from exposure to the air. Under these conditions no appearances of life were seen, and the scientists therefore concluded that the animalcules were developed from spores which enter the water or organic liquid

from the air. There is no known instance of spontaneous generation, and it is generally conceded that life comes only from life.

As we "think God's thoughts after Him" in the study of science, we more and more come to believe that His law regarding life and its procreation is a most effective one for the perpetuation and development of the species. And the principle which prevails throughout the plant and animal world, God also instituted for the generation of the human race, the crowning glory of His creation. Men and women, however, have failed utterly to understand the sacred import of the law, and as a consequence they can not see the sacredness of bringing a human soul into existence. This is the reason why many parents can not instruct their boys and girls concerning the origin of life. It is no wonder that children obtain the current distorted ideas of sex, that they regard their bodies with shame, and fall into evil practices which ruin them physically, mentally and morally.

Does it not seem that the wise thing to do is to cast aside the veil of prudery, and encourage people to gain a clear, comprehensive view concerning the law of the reproduction of mankind, and the relation it bears to the perfection and development of the race? Nothing can be gained through ignorance, but very much lost, as is being proven these days. With scientific knowledge regarding the law will come reverence for it; and with knowledge and

reverence as a beginning, more consecrated conduct will follow. We are told, "Ye shall know the truth, and the truth shall make you free." It is knowledge of truth, reverence for truth, and the living of truth—these three alone—that will liberate the race from the bondage of sensuality and degeneracy in which it is held, and bring it onto the high plane where the Creator intended it should exist. Therefore every effort to enlighten the people concerning sex principles is a step toward race betterment.

Another truth regarding life is that "Like tends to beget like." This law of heredity is just as forcible to-day as when God established it. Its manifestations are seen everywhere in nature. The rose comes from the rose; the oak from the oak. The eagle begets the eagle; the lion, the lion. Without this law the universe would be in a most chaotic state; but because of it the different plant and animal species continue their types from generation to generation.

Although in their investigations scientists have not been able to ascertain what life really is, they all relate some facts concerning it. They affirm that every living organism must perform certain functions; there are attributes possessed by it in common with every other living organism. There is organization, or the presence of organs to carry on the work of the individual; there is the power of growth; of reproduction; of assimilation; and of

irritability, or susceptibility to influences or stimulation from outside, as of light, heat, electricity. To make up the complete organism, whether plant or animal, these qualities must all exist in normal vigor.

Also the scientists tell us that wherever there is life, there is protoplasm, called by Huxley "the physical basis of life." It is a very complex substance, semi-liquid in character, consisting of carbon, hydrogen, oxygen, nitrogen and sulphur, as essentials; and in its more complicated forms also containing phosphorus, sodium and other elements.

Protoplasm always exists in the form of a cell or collection of cells; each one consisting of a nucleus, the small, inside, dense portion; and the cytoplasm, a larger, less dense portion, surrounding the nucleus. There are various one-celled plants and animals performing all the work of the organism through the single cell. They reproduce by fission or division, the nucleus gradually elongating and dividing into two nuclei, the cytoplasm also elongating and dividing into two equal portions, carrying a nucleus with it. Thus two distinct individuals are formed. Then these two divide into four, the four into eight, the eight into sixteen, and so on indefinitely.

But reproduction can not always take place in this manner. The individuals of the species expend much energy during their existence; hence in time the race as a whole weakens. The individuals then instinctively join in pairs, the cytoplasm and the

nuclei of two cells gradually fusing, until one cell takes the place of two. Then division takes place as before until the species again becomes enfeebled, when conjugation once more occurs. Thus in many of the one-celled plants and animals there are the two recurring phases of reproduction. The true purpose of conjugation has been demonstrated by experiments upon the Paramœcium. When individuals in a weakened condition were prevented from uniting, they gradually ceased to divide, and finally died. Therefore we may conclude that the union of cells in reproduction is designed for the continuation of the species.

In the very simplest forms of life there seems to be no difference between the conjugating cells. However, when we come to the Volvox, which is probably the simplest of the multicellular animals, we find two kinds of procreative cells. There is the egg, large, round and inactive; and the sperm, which is small, elongated and active; the union of these produces offspring. The Volvox exemplifies reproduction as it almost universally takes place in the plant and animal world.

In the plant the medium of generation is the flower, the pollen from the stamen fecundating the ovules, whereby they may develop into seeds. The milt of the fish fertilizes the spawn of the female fish; the sperm cells of the bird impregnate the eggs of the female. However, there are some exceptions to this general rule in reproduction. We have

learned that the lowest orders of life generate by division; and some higher plants and animals reproduce in the same manner. For examples of the latter, the hydra can be cut into pieces, each piece having the power of developing into a new, complete hydra. Also the starfish may have a severed arm, but it is capable of growing all the other arms and the disk, so as to form the whole body. The potato will spring from buds, or eyes, planted in the ground; the strawberry and blackberry from runners; the geranium and fuchsia from cuttings; and the dahlia, tuberose and hyacinth from bulbs. Yet, while all these can reproduce from one parent, they propagate also by means of united sex cells; and so common is the fact in nature that to produce offspring there must be an intermingling of body substance from two distinct individuals, that it may be regarded as the Universal Law of Reproduction.

It is in this manner that the different types of plants and animals are prevented from becoming extinct, as was learned from the experiments on the Paramœcium. Not only is this method of generation a guaranty of the perpetuation of the species, but also it insures their variety and improvement. Since the beginning of the organism is composed of parts of two individual bodies, the difference between ancestor and descendants is certain. The offspring will receive the traits of both parents instead of being copies of either. Then, too, good qualities existing in common in the parents will be strength-

ened in the offspring; and a desirable trait in one will tend to offset an undesirable trait in the other, so that it is possible for the offspring to be superior to either parent.

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CHAPTER II

HEREDITY

"Every truth we know is a candle given us to work by."
—*Ruskin.*

WHILE it is true that, as a rule, humanity comes to earth unplanned, and civilization is served by sluggish brains and clumsy hands, yet domestic plants and animals are brought into existence by design, and more and more scientists are aiding them to attain to those points of excellence that mankind plans for them. Even the wild plants and animals are in a state of constant improvement, for Nature does not allow the indiscriminate generation of the species, but exercises "natural selection," destroying the weakest individuals and permitting only the best qualified to grow up for parenthood. Horticulturists and stockmen supplement Nature's work also by cutting off from propagation the most unfit of their flocks and herds; and the scientific breeders carry on a still higher degree of artificial selection; having an ideal for the plants and animals which they desire, they select as progenitors only those which measure up to that standard.

The experiment of the Illinois Agricultural Experiment Station, begun in 1896 and completed in

1908, for the purpose of securing high and low percentages of protein and oil in corn, is only one of many similar experiments carried on in this country and other lands. In the protein test, one variety was produced containing more than half again as much protein as the other; and in the test for low and high percentage of oil, a strain was produced three times as rich in oil as the other. These results prove that man can obtain almost everything he wishes in the plant world if he but put forth wise, scientific efforts in his labors.

Luther Burbank generally is conceded to be one of the greatest plant breeders. He has most wonderfully improved many varieties of vegetation, and in some instances has created new species. He has obtained these results by means of artificial selection, always choosing the best specimens of plant life for breeding purposes; and by pollination, sifting the pollen of one flower onto the stigma of another, instead of allowing the wind, bees or insects to be the instrument of fertilization. He has originated and introduced twenty different varieties of prunes and plums which are the best known and most successful grown. He has had marvellous success in his work with flowers. The beautiful white Shasta daisy is one of his creations. It is a cross between the little field daisy of our own country, chosen for its hardiness; the daisy of Japan, noted for its exquisite whiteness; and that of England, selected for its superior size. The blossoms

are from five to seven inches in diameter, and when cut will remain fresh in water from three to six weeks. It is said that the Burbank potato has enriched the world by twenty million dollars, and another production of his which promises to be of equal, if not greater value, is the thornless, edible cactus. Its value is now being tested near Indio, California, and in Victoria, Australia. It will grow in the most arid region, is deprived of thorns and spicules, and is palatable and nutritious for both man and beast. If it remains true to its type it will reclaim the deserts from barrenness and waste. Regarding the possibilities of work in plant breeding, Burbank says that there is no barrier to obtaining fruits of any size, form or flavor desired, all that is needed being a knowledge to guide one's efforts in the right direction.

Wonderful results also are produced in the animal world. Comparison between a wolf and a dog shows their striking likeness to each other. It is not difficult to understand that the latter was evolved by man's constant choosing for many generations the least ferocious wolves for propagation. Scientists tell us that our gentle, fireside-loving puss has been evolved from the wild cat, and the fat, grunting hog of the average farmyard from the wild boar. All of the fine thoroughbred strains of horses, dogs, cattle, swine and sheep, of which stock breeders are so proud, are the result of careful selection and breeding. As an instance:

in establishing his stock farm at Palo Alto, Leland Stanford planned to strengthen the trotting horse by crossing it with a larger running horse. He thereby obtained a large, strong, supple horse, intelligent, very clean of limb and sleek of coat. For some years this breed of horses held the world's records for speed in their various classes and ages.

In the human race also we are learning the meaning of heredity. The story is told of a little boy who, being reproved by his mother for not having as high grades in his school as Tommy Jones, replied: "Yes, but you must remember that Tommy Jones has very clever parents." That boy intuitively grasped the great principle of heredity which older people sometimes are slow in accepting.

Often some particularly strong characteristic will be manifest in a family for generations. The father and grandfather of Beethoven both were musicians; in the family of Mendelssohn there were several musicians of note; and Bach was a member of an illustrious family in which this genius appeared in eight generations, there being twenty-nine musicians of eminence therein.

In our own country and within our own period of history we have the exemplification of a superior type of intellectuality springing from two gifted ancestors and appearing through a long line of descendants. Richard Edwards, a lawyer of high repute and great learning, married at Hartford,

Connecticut, in 1667, Elizabeth Tuttle, who was a very beautiful woman, of queenly and commanding appearance, with a strong will, a vigorous mentality and a most striking personality. From them descended, through their only son, the following: Jonathan Edwards, one of the world's greatest intellects, and at one time President of Princeton College; Timothy Dwight, President of Yale; Timothy Dwight, second, also President of Yale; Theodore William Dwight, founder and for thirty-three years warden of Columbia Law School; the wife of Eli Whitney, who burned the midnight oil to help the inventor to attain his enduring fame; Catherine Maria Sedgwick, of graceful pen; Charles Sedgwick Minot, authority on biology and embryology in Harvard Medical School; and Winston Churchill, author of "Coniston." Also we must mention another personage of keen intellect and great learning, but of inferior moral stamina, Aaron Burr, the traitor. Through the four daughters of Richard and Elizabeth Tuttle Edwards came Robert Treat Paine, one of the signers of the Declaration of Independence; the Fairbanks Brothers, manufacturers of scales and hardware at St. Johnsbury, Vermont; Morrison R. Waite, Chief Justice of the United States; Melville M. Bigelow, the law author; and Ulysses Grant and Grover Cleveland, Presidents of the United States.

It was once said by a famous biologist: "Man has in his anatomy a collection of uniques—we are

full of reminiscences." Although the author referred to the current belief in man's ascent from the lower orders of life, the statement is even more forcible when applied to man's heritage from his father, grandfather and their immediate ancestors. The hours spent by the Beethovens, Bachs and Mendelssohns in strenuous practice at the piano, and the ceaseless study and years of professional toil on the part of the Edwards, are pleasant reminiscences, and have been of immense value to humanity. Not so the drunken carousals and sensual debaucheries in which many families have taken part. These might well be forgotten if possible; but that can not be, for the forces are just as potent in evil as in good heredity, as is evidenced in numberless instances.

From Max Jukes, a notorious drunkard, there descended in seventy-five years, 200 thieves and murderers, 280 invalids attacked by blindness, idiocy or consumption, 90 prostitutes, and 300 children who died prematurely. The various members of this family cost the State of New York more than a million dollars.

From a drunken vagabond woman in Germany have sprung eight hundred and thirty-four descendants who are feeble-minded, prostitutes, tramps, paupers and criminals (some of them being murderers). The cost to the Prussian government in caring for them has been a quarter of a million pounds.

In the "Hill Folk" is another example of the

transmittance of evil tendencies throughout many generations. The progenitors of these people were shiftless, feeble-minded and alcoholic; the descendants are and have been degenerates of the first magnitude. From 1901 to 1910, 29 1-10 per cent of all aid given to paupers in the one little Massachusetts village where the ancestors first settled, was given to members of the Hill families. The court and prison records during the past thirty years show that at least sixteen of the Hill stock have been sentenced to prison for serious crimes, chiefly against sex, the expense to county and State being at least $10,763.43. As public wards they have cost the State, as accurately as can be estimated, $47,719.32. The burden which these folk place upon the community is constantly increasing and out of all proportion to their numbers.

The fact that feeble-mindedness, epilepsy, insanity and other forms of degeneracy are passed on from ancestor to descendants, is now well authenticated by careful and systematic investigations. Dr. H. H. Goddard, of the Vineland (N. J.) Institution for Feeble-minded, and former Vice-Chairman of the Eugenics Section of the American Breeders' Association (now known as the American Genetic Association), has shown from the genealogies of 187 families connected with that institution that where both parents were feeble-minded, there were no normal offspring; and that where there is an heredity of feeble-mindedness, only about two-

fifths of the total number of offspring are normal.

Dr. C. B. Davenport, Director of the Department of Experimental Evolution at Cold Spring Harbor, and former Secretary of the Eugenics Section of the American Breeders' Association (American Genetic Association), also has made a careful study of a large number of family records, and the conclusions which he forms are somewhat in accord with those of Dr. Goddard. He says that where both parents are mentally defective, all the children will be mentally defective; where one parent is thus afflicted, and the other normal but of blood thus tainted, one-half of the offspring will be abnormal; and that where both parents are normal, but of tainted blood, one-fourth of the offspring will be mentally defective. The above statement refers to insanity, feeble-mindedness and epilepsy. The two latter types of degeneracy are interchangeable in heredity; if one defect appears in a parent, either may be manifest in the offspring.

Research works show that, to a certain extent, tramps, inmates of workhouses, inebriates, prostitutes and criminals are composed of the feeble-minded class. Of nearly 15,000 women who passed through Magdalen Homes in England, 2,500, or nearly 16 per cent, were definitely feeble-minded; and at the Pentonville Prison, in England—not counting those who were mentally unfit for prison discipline—18 per cent of the adult prisoners and 40

per cent of the juvenile offenders were found to be mentally defective.

Physicians disagree with reference to the hereditability of tuberculosis, or the white plague, some believing that it is transmitted from parent to child, others that the tendency alone is transmitted, while others believe that it is simply infectious. But authorities—none of them—doubt the power of parents to pass on to their children the black plague, the awful diseases due to immorality, which leave in their train such frightful consequences.

Does it not seem that the twentieth century civilization is almost a farce when we stop to consider that in this land there are 150,000 each of the insane, feeble-minded and epileptic, 5,000,000 young men under the age of thirty years who are victims of the social diseases, 50,000 deaf, 110,000 blind, 100,000 paupers and 80,000 persons imprisoned for crime, and that to a very great extent these unfortunate individuals are permitted to marry and send their tainted traits all down the ages? Nearly $100,000,000 is annually expended to care for these people, but would it not be far wiser to "put a fence around the edge of the cliff," rather than "an ambulance down in the valley"? Would it not be the part of discretion, and one might even say of true patriotism, to absolutely prohibit these not-up-to-the-standards from raising families? True it is that Indiana, Minnesota, Michigan, North Dakota, California, Connecticut, New Jersey and other States have laws

upon their statute books forbidding marriage licenses to those who are unfit for parenthood, as the epileptic, feeble-minded, insane, and those afflicted with the social diseases; and Indiana, California, Connecticut, New Jersey and other States have passed Sterilization Laws placing beyond the power of procreation such individuals as criminals, idiots, imbeciles, rapists and the insane. But these laws are not strictly enforced, and therefore of not much material benefit to the country.

The great need is for a vigorous campaign on the subjects of health, heredity and sex hygiene, setting forth the direful consequences of evil living and the certainty of the transmission to posterity of some types of physical and mental diseases. Persons who have serious inheritable diseases should never be allowed to propagate their kind. This problem could be solved either by sterilization or segregation. The operations of vasectomy and fallectomy make parenthood impossible by severing the tubes which conduct the reproductive principle for the purpose of procreation, and allowing the life force to be reabsorbed in the system. Sterilization by these means is regarded by many as a most cruel procedure, depriving an individual of his or her rights; yet it must be remembered that the community, the State and the country also have rights which can justly be pitted against those of the individual. Segregation, the separation of these afflicted members of society from all other individuals, and each

sex by itself, seems to some persons the only means of remedying the situation, and it has this advantage, that if at any future time they become sound and strong, they may take their place again in society and may become parents. A further benefit that is even greater and more far-reaching is, if persons afflicted with the social diseases are segregated, they will not be in a position to communicate their diseases to innocent people. Whatever be the method decided upon, whether it be sterilization or segregation, stringent laws should be enacted and most rigorously enforced, for the greatest foes our country has are those from within, and they must be met and successfully vanquished if we would continue to be a strong nation.

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CHAPTER III

RACE POISONS

"God never jests with us, and will not compromise the end of Nature by permitting any inconsequences in its procession."—*Emerson.*

People of all ages have sought for happiness. They are not aware that it comes only through the normal exercise of life's functions, in thinking, planning, doing, loving. They look for it in self-indulgence and sense-gratification; in the pleasures of "the world, the flesh and the devil"; anything that "will help us to forget time and space and ourselves—all we have worth remembering. These pleasures turn to misery in our lives, but a far more direful consequence is that they turn to greater misery in the lives of our posterity, because of the fact that the harvest is always larger than the seed sowing.

The use of tobacco, alcohol and drugs may seem to offer a certain amount of pleasure, but posterity often suffers a lifetime of misery for the moments and hours of self-indulgence of ancestors. It is said that Francis Bird, in making a call upon Dr. Howe, found him with his feet swathed in flannels.

"What is the matter?" asked Mr. Bird.

"Gout," was the answer.

"Gout? What caused it?"

"Whiskey."

"I thought you never drank any intoxicating liquors."

"I don't, but my ancestors did, and I am footing the bill."

Nearly all authorities are now agreed as to the deleterious effects of alcohol upon posterity. Dr. Saleeby maintains that alcohol is a race poison—that it acts as a poison to the germ cell. Experiments upon animals have proven it true. It was shown by Combemale that pups begotten of an healthy female by an alcoholized dog were congenitally weak and showed marked asymmetry of the brain. Friedenwald found that when pregnant rabbits were given alcohol they delivered their young prematurely. In one experiment where twenty rabbits were so fed, seventeen aborted, and eight of them died soon after of septicæmia (blood poisoning). Nearly all of the young which were born at full term died a few days after birth.

Dr. T. Alexander MacNicholl, a renowned authority on the subject of alcohol and degeneracy, who was sent to Europe by Theodore Roosevelt during his administration as President of the United States to make further study and research, has cited some cases which show the differences in heredity between the children of the drinker and the children of the abstainer. He made a study of two groups

of families living under the same conditions and in the same environment. Sixty-five children were born in the ten families of regular drinkers, during the period of investigation, thirty of whom died in infancy, one was insane, one epileptic, four anæmic, three had very poor teeth, one was diabetic, three had heart disease, two were imbeciles, five were neurotics, three had adenoids, eight were tubercular, and only four were normal. In their studies at school two of the children were excellent, six fair, and seventeen deficient. In the ten families of total abstainers, there were seventy children, of whom only two died in infancy, one was anæmic, one tubercular, one neurotic, one rheumatic, and sixty-four were normal. In their studies at school fifty-six were excellent, ten fair and two deficient. In the children of the total abstainers, 90 per cent were normal in mind and body as against 7 per cent of the drinkers' children.

Perhaps some will say, and correctly, that other existing conditions might have helped to bring about these woful results. However, without doubt many of these indirect or contributing causes, such as unwholesome environments, inharmony in the home, mental anguish and suffering, insufficient nutrition on account of poverty, were occasioned by the drink itself.

In the light of such facts as the above, can a woman who wants to be just and generous to her future offspring marry a man that drinks alcoholic

liquors? And can a man who would be truly loyal to his family, his community, his nation, and humanity in general, take that into his body which "steals away his brains" and the brains of those to come after him?

The extent of the ravages of drink will be never accurately known; and it is only when we study what scientists tell us that we can begin to imagine how great may be its consequences. Dr. Axel Gustafson, one of the world's greatest authorities concerning the effects of alcohol upon the human system, says that it is pre-eminently a brain poison. The brain essentially is composed of oxygen, fats and water, and alcohol has a marked affinity for these substances. It takes the loose oxygen from the red blood-corpuscles, thus retarding normal oxidation, and inducing accumulation of waste material; it dissolves fats, tending to paralysis of cell function; and it abstracts water from the protoplasm, producing shrinkage of the cells. These conditions existing any length of time will cause the cells to degenerate, connective tissue to form and normal functions to be permanently impaired.

There is no wonder then that the person imbibing freely of alcoholic drink staggers about the street, talks incoherently, acts madly, often committing violent criminal acts. His body becoming filled with the poison, gradually yields to weakness, degeneracy and disease. But more than that, since alcohol is so strong a brain poison, the individual

using it often becomes mentally deranged. And since mental derangement is transmissible from ancestor to descendants, it is only reasonable to suppose that the foundation is often thus laid in drink for a long line of hereditary insanity. This is in harmony with statements made by Superintendents of Insane Hospitals, who tell us that drink, directly or indirectly, causes from 47 to 60 per cent of the insanity in this country, some authorities putting it as high as 95 per cent.

Intemperance is closely related to crime and prostitution, not only in the individual, but in his offspring. The Jukes family, the Hill folk and the progeny of the notorious vagabond woman in Germany, so many of whom were criminals and prostitutes (to whom reference was made in the preceding chapter) sprang from drunken ancestors. Mr. Dugdale, a careful student of criminality and its causes, and a member of the Executive Committee of the Prison Association of New York, in a study of 223 convicts, found that 42.49 per cent came from intemperate families, 39.05 per cent of the convicts themselves being habitual drunkards. Upon looking up the family histories of 2,000 erring girls, it was found that 1,464 had drunken fathers and 1,140 drunken mothers. Dr. Praskovia Tarnovskai examined at St. Petersburg fifty prostitutes and found that 82 per cent had parents who were habitual drunkards.

For many generations the German people have

been heavy consumers of alcoholic liquors, it usually being considered that the indulgence did not injure them. However, Kaiser Wilhelm has recently become a total abstainer, and in an address to the naval cadets admonished them to free themselves from the evils of drinking, saying: "The next war and the next sea battle demand sound nerves of you. Nerves will decide. These become undermined through alcohol and from youth up by the use of alcohol endangered."

Alcohol spells only desolation for the country in which it is freely used, for men of authority say that all the diseases which come as the result of drinking liquor are liable to become hereditary even to the third generation, gradually increasing if the habit is continued, until the family is extinct. This cutting off of the wicked from the earth may not occur until the fourth generation, or later, but retribution will come in some way at some time. "Though the mills of God grind slowly, yet they grind exceeding small."

What is a nation to do that is in the shackles of the rum traffic? There is only one course to pursue, and that is to extirpate the curse so that there is left no trace whatever of the evil thing. Some say that it never can be done, but that is not assured. Formerly it was thought that the relation of this question to the country's finances was a serious barrier, but it is now known that the income derived from the liquor traffic does not begin

to equal the amount of money expended in caring for the results of drink.

And now that scientists are almost unanimously agreed concerning the direful effects of liquor upon humanity, and since more and more its use as a medicine is being discontinued, the only excuse for its existence is the gratification of perverted appetite and the swelling of the coffers of those who are in the business. It certainly seems that if the true, loyal citizens will stand united, they will be able to answer these arguments at the ballot box and thus forever drive the traffic from the land.

Very much is being said and written these days concerning the evils resulting from the social diseases. This information is being so widely disseminated that it might seem that all young people had the knowledge necessary to safeguard themselves and their future homes. However, it will not be out of place here to relate some of the ill effects that come to the young man who "has had his fling," also emphasizing the fact that those closely associated with him share in the consequences of his evil living. Syphilis, one of the social diseases, infects the blood, and therefore reaches the entire body. Professor Alfred Fournier, of France, a conceded authority on this subject, says that the skin is most frequently affected and that the brain is the next point of attack; the brain is called the "prince of organs," which rules all the other organs and governs the entire human machinery. There-

fore it is easy to believe what the Indiana State Board of Health says in one of its circulars, namely: that the disease is responsible for 90 per cent of locomotor ataxia, a large per cent of insanity, for paralysis, apoplexy and sudden deaths, sometimes even after the malady is thought to have been cured. Insurance companies refuse to insure a syphilitic person for four or five years after the disease has been acquired, and then only upon special terms. Their records prove that the disease shortens life one-third. The syphilitic person is a menace to society since he can communicate the disease to those about him, and he is a veritable curse to his children, who have thrust upon them the results of his riotous living. The hereditary marks are manifest in different forms, in defective development, abnormal organs, in deviations from the natural type; hence we see the deformed, hunch-backed, grotesque creature—some of the actual monstrosities of life; the hydrocephalous, hysterical, neurasthenic individual; the epileptic and the deaf mute; and those who are weak in intelligence, the backward, the simple, the imbecile and the idiot. A most pitiable case of heredity is that of a girl whose physical growth had been stunted, her vision nearly destroyed, and at the age of eighteen she was just learning to spell "cat" and "dog."

Very often children are destroyed from the effects of this disease before or very shortly after birth. Dr. Fournier found that of 447 children

whose fathers or mothers were syphilitic, there were 343 early deaths, only six surviving the first year. Another authority states that one-third of all children of syphilitic parents die before birth, and of the remainder, 24 per cent die within the first six months of life. Thus, natural selection, in the form of this disease, steps in and prevents the preponderant accession to the race of degenerate individuals.

The other social disease very often results in sterility, thus becoming a factor in race suicide. It is responsible for very much suffering, and while it is usually considered of local character, it can invade every tissue of the body. The individual who contracts gonorrhea may communicate it to others long after he thinks that he has been cured. The following is only typical of what is going on all about us. A young man, after following evil ways for some time, finally decides to "clean up his deal with the devil." He marries, and the happy couple start on their honeymoon trip, but they return in a short time, the bride appearing worn and haggard; she is not well, and continues to grow worse. In a few months she submits to an operation. Her life is spared, yes, but she becomes a hopeless invalid, making no plans, dreaming no dreams. Never will she look down at her breast into the eyes of her little one, for she can never have one. Physical suffering, mutilation of the body, loss of womanhood, a childless home, and loss

of faith in him whom she loved most devotedly; all these are given to the young and beautiful wife by the husband who in the days of his young manhood had been "having a good time."

The consequences are not always as pictured above. Sometimes a little babe is born in the home, but its eyes are affected. Doctor and nurse do all in their power, but in a couple of weeks the infant becomes totally blind. The innocent mother had been infected by the husband, and the infection had found its way into the eyes of the little child. A conservative estimate is that 25 per cent of blindness in children is caused in this way. Can you imagine the remorse of that young father when he learns the true cause of the affliction? Verily, "the last bill was not handed in" when he gave up his evil ways.

How true it is even in these days of enlightenment and progress that

> "Folks talk too much of a soul
> From heavenly joys debarred—
> And not enough of the babes unborn,
> By the sins of their fathers scarred."

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CHAPTER IV

INSTRUCTION IN SEX TRUTHS

"Better a year too soon than an hour too late."

WHO stand guilty at the bar of justice for the deplorable conditions existing to-day? Not only the husbands and fathers who are directly the cause of so much suffering, but any one and every one who hold the thought that men can not lead clean lives, and who condone their evil ways. Before deciding to found a home, the young man should ask himself the question not only, "What will posterity say of me?" but also, "What will posterity do because of me?" He should have been taught that the character of his future offspring will be based upon his own thoughts and deeds; and that if he lives wickedly, he will have children that will rebuke him every hour of their lives.

Does he know these things? No! In childhood he was left in ignorance concerning his sex nature. He asked his parents where babies came from, and they told him that the doctor or nurse found them under the haystack and brought them to their homes. The native intelligence of the child could not accept such a statement, and again he asked the

question, this time to be reproved and put off with the words, "You must not think of such things"; just as if it were a crime to want to know about the coming of children into the world. Poor deluded father and mother not to know that, being driven from them, the child will get the information from some other source. He goes to an older playmate and hears the story of life translated into the foul words of the street, in this way receiving the first and most lasting impression of the most sacred thing in all the world. Because his parents were too prudish to tell him the truth, a knowledge of impurity has been gained, and the vicious habit into which he falls soon holds him in its clutches. When, as a young man, he realizes the seriousness of the situation, perhaps he consults a physician who may advise him to secure a mistress, or in going to a house of shame, to be careful in the selection of his companion in crime. Many doctors do not offer this kind of advice, but why do any of them do so? Why do they not offer the young man suggestions and practical hints which will help him to overcome his evil habit? Why do they not advise him of the injurious consequences to himself, his future wife and unborn offspring, if he visits the house of ill repute, and then show the contrasted picture of the beneficent effects of clean living; telling him that by conserving his vital force it will be disseminated throughout his body and build him up into a splendid, vigorous manhood? It is their privilege to

impart this knowledge, inspiring the young man to say to himself:

"I will guard my passions as Kings guard treasures,
And keep them high and clean,
(For the will of a man, with his passions, measures;
It is strong as they are keen).
I will think of each woman as some man's mother;
I will think of each man as my own blood brother,
And speed him on his way.
And the glory of life in this wonderful hour,
Shall fill me and thrill me with Conscious power."

The efforts of platform and press to arouse the interest and consciences of people concerning the necessity of sex instruction are most praiseworthy and are helping to create a healthy public sentiment which is making its influence felt. Societies of Sex Hygiene and other organizations are circulating literature on the subject; also Parent-Teachers' Associations, in which parents and teachers co-operate, are discussing methods whereby the children may best be enlightened; and a number of Public Schools throughout the land are inaugurating courses of study in personal purity or sex hygiene. Although the methods of instruction will vary in different schools, the same general plan will doubtless be followed in all, namely: the imparting of sex hygiene instruction to children of the lower grades through nature study lessons; and to the grammar and high school youth through studies in botany, zoology, anatomy and physiology; boys and girls in separate

classes to be taught concerning the physical and psychical changes that come to them at the age of puberty; the girls to learn that they should allow no familiarities from the other sex, and to be warned as to the wiles and arguments which the betrayers use to ensnare girls and women; the boys to be taught the beneficial effects of continence and the injurious consequences of squandering life force; both boys and girls to study the laws of heredity so as to understand that their thoughts and deeds of to-day will have an influence upon their posterity of to-morrow.

All this knowledge can be imparted to the youth of the public schools, and may the time soon come when every school throughout the land will inaugurate courses in sex hygiene or personal purity. But this instruction should be only supplementary to that given in the home. Children should know something of the mystery of life before being sent to school, so that they will not be contaminated by what others may tell them. Conscientious parents early train their children in truthfulness, honesty, obedience, reverence, courtesy and kindness, and continue doing so until maturity is reached; but on the question of purity, very, very often not one word of instruction is given. Why do the father and mother hesitate to tell the boy or girl the secret of life which would safeguard them against uncleanness of thought and conduct? Because they can not, holding, as they do, incorrect ideas of sex and

an improper conception of life in its different phases. Let them get a true reverence for life and God's view of sex, then it will not be a difficult matter to unfold the mysteries of life to the child. When the question is asked, "Where did I come from?" the psychological moment will have arrived for the narration of the facts. The mother can say that once he or she was a tiny egg in mother's body, and that the egg grew because her own blood nourished it; and that when it became large enough, God opened the door in her body through which the child passed as a tiny babe. The secret of life is usually told to children in this way, and when they understand that the mother gives herself and must suffer in order for them to have an existence, a bond of affection is usually established between mother and child which is truly beautiful.

When the boy or girl is ready for the more serious part of the story, they can be told that the reason they love their father so well is because they are also a part of him; that he, too, gave a part of his life that they might be; that God bestows upon every living thing in the world a father and a mother, this being His way for keeping life on the earth. Have them understand that the whole subject is a sacred one, not to be discussed with other children, but only with father and mother, who will answer anything and everything they wish to know. They should not have the impression that anything is being withheld, for then their curiosity will be left

unsatisfied and they will think there is something impure about sex. However, the questions which they ask will not seem embarrassing, but can be easily answered if the whole subject is regarded as sacred and viewed from the standpoint of the Creator.

The prudent mother will dwell upon the necessity of caring for the body, telling the children that certain organs are set apart as the life-giving organs; and are never to be desecrated in any way, for that is a sin against themselves and God; and that if they want to grow up strong, healthy, vigorous men and women, they must regard the entire body as the holy temple of God. Knowing the awful prevalence of impurity among the young, she will be ever on the alert watching lest her children be contaminated by some other child. Also she will keep them busily occupied with interesting and absorbing work or recreation, instilling into their minds the highest ideals and noblest ambitions which will fill their lives so completely that they will have neither time nor inclination for anything of immorality.

Thus all along the way, the parents, and especially the mother, will instruct, guide and inspire, in a very great degree helping to answer the prayer of the children as voiced by Kipling:

"Father in Heaven, who lovest all,
O help Thy children when they call;

That they may build from age to age
An undefiled heritage.

"Teach us to rule ourselves alway,
Controlled and cleanly night and day;
That we may bring, if need arise,
No maimed or worthless sacrifice."

Instruction concerning sex must be given in the public school, the Sunday school, in normal schools, colleges and universities, and from pulpit, platform and press; but more than anything else is the need of intelligent, faithful, consecrated parents who will teach their children about the beginnings of life, and carefully and wisely train them in purity. If all could have this kind of parents for a few generations, the time would not be far distant when there would be no more "maimed or worthless sacrifices" of humanity, but children and young people leading clean lives and building "an undefiled heritage" for God and their country.

CHAPTER V

TOBACCO AND DRUGS

"If God should wink at a single act of injustice, the whole Universe would shrivel up like a cast-off snake skin."—*Arab Proverb.*

THE problem as to the causes of race degeneracy and race suicide will never be completely solved until exhaustive investigations and experiments are made relative to the effects of tobacco on posterity. The consumption of tobacco has increased so rapidly during the past fifty years, that naturally one inquires if it might not be a factor in causing the declining birth rate and the alarming increase of insanity, feeble-mindedness, epilepsy and other forms of degeneracy.

It is well known that one pound of tobacco contains three hundred and eighty grains of nicotine, a poison second only to prussic acid in virulence. One-twentieth of a drop is sufficient to completely paralyze a frog, one drop to kill a dog, and in poisonous doses it will destroy the life of a man in from two to five minutes. The smoke from tobacco, in addition to the nicotine, contains ammonia and carbonic acid; the ammonia causing dryness of throat and mouth, which produces abnormal thirst, usually

only allayed by alcoholic drinks; and the carbonic acid inducing sleepiness, lassitude and headache. In the smoke of tobacco is also found the deadly poison, empyreumatic oil, one drop of which injected into a cat causes death in a very few minutes. It is believed by some that to swallow all the smoke from one cigar would be sufficient to kill a beginner.

It is probably conceded by all physicians that immoderate smoking is directly the cause of many cases of acute indigestion, and is an important factor in producing arterio-sclerosis, apoplexy, interstitial nephritis (inflammation of the kidneys) and a weak heart.

The use of tobacco has a most harmful effect upon the intellect, impairing the memory and the ability to concentrate the mind on study. A man of prominence who knew the evil consequences of smoking said that it never failed to render him dull and heavy, and to weaken his powers of analyzing subjects and defining ideas. Because of its injurious effects upon the mind, tobacco has been forbidden to the students at the U. S. Naval Academy at Annapolis, and the Board of Visitors and Directors at West Point Military Academy have recommended that its use be prohibited among the cadets at that place. The French government has forbidden the students of the state colleges to smoke, it being found that only six out of an hundred smokers were able to take a place in the first division.

Physicians say that tobacco produces eye difficul-

ties, such as myosis, amaurosis, and atrophy of the optic nerve, which do not yield to treatment unless the patient discontinues the use of tobacco. Very often these diseases are passed on to offspring, causing such defective vision in them as to necessitate the wearing of glasses. One of the most noted ophthalmic surgeons of the United Kingdom, Dr. R. B. Carter, says that tobacco smoking has the tendency to produce blindness. At first he was sceptical on the subject and made the above statement only after forty years of experience as a physician. But this is not all. Superintendents of Insane Hospitals say that the use of tobacco tends to produce insanity, even when there are no other complicating causes; some maintain that it is even a greater causative factor than the drinking of spirituous liquors.

The effect of tobacco upon the individual being so deleterious, the question may well be asked as to its bearing upon his offspring. Upon this point, as well as upon all others, proof must be sought, and not a mere expression of opinion be given. Dr. Saleeby, a noted authority on Eugenics, says that it is only the fanatic who would affirm that there is any relation between racial degeneration and tobacco smoking. He says that immunizing substances, or anti-toxins, are doubtless produced in the smoker's blood which may protect his germ cells as well as his own body. But he does not show that they are so produced; and the fact that the

individual suffers physically and mentally from tobacco smoking proves that the anti-toxins are not supplied in sufficient quantities to guard the body cells; and if the body cells are not protected against nicotine poisoning, there is no valid ground for saying that the germ cells will be uninjured since the same blood nourishes both.

This conclusion is in harmony with the statement of Dr. Borel, who says that tobacco smoking makes the individual socially unfit, brutal and criminal since it leaves its consequences in the poisoning of his germ cells. But not only that, if husband and wife be not continent, the system of the wife becomes saturated with the nicotine and her reproductive cells also are poisoned. Surely strong, healthy offspring can not come from such sources. Then, too, the wife is breathing the emanations from her husband's skin and lungs, and is often called upon to inhale the smoke from his cigar, pipe or cigarette, producing in her highly nervous conditions. That breathing nicotine-laden air by mothers has an injurious effect upon offspring is not generally known, but investigations carried on among women working in tobacco factories strongly confirm the above opinion, if not actually proving its truth. Dr. Kostral, physician to the Royal Tobacco Factory of Iglan, near Vienna, says that the women working in the factory who bear children and furnish nourishment for them have inflammation of the breast, and their milk has in it the

odor of tobacco. That is not to be wondered at, since the women are exposed ten hours each day to the atmosphere charged with tobacco dust.

Of 506 children born in three years to these women, there were 11 cases of fœtal death, and 181 cases of death during the first year, the curious fact being that the major part of these infants died when from three to four months old, just when the mothers returned to work in the factories. One hundred and one of these children had brain disease and died with convulsions. If such ill effects befall offspring because the mothers have breathed the atmosphere which was laden with tobacco dust, could any less injurious consequences be expected when wives breathe tobacco smoke, and the exhalations from their husbands' lungs and skin?

Dr. Playfair leads us to believe that it is a factor in causing loss of fœtal lives, same occurring in women who occupy overheated rooms where there are noxious gases in the atmosphere. It is said that where tobacco is smoked in badly ventilated rooms, the air becomes highly charged with carbon monoxide gas, the person breathing that atmosphere not only starving his or her blood of oxygen, but introducing into it the poison of carbon monoxide. Since the unborn child depends upon its mother's blood for nourishment, we can easily see that if this supply of food be poisoned, there must be evil consequences.

From experiments performed upon animals, Dr. Tidswell has formed the conclusion that nicotine

poisoning may be the cause of painful childbirth. He also believes that nicotine may be found to produce sterility in man, since the poison existing in the life principle and in the blood might easily act as an irritant and bring about reflex action of nerves and muscles.

Another authority makes a statement somewhat similar to the above, which has a very decided bearing on Eugenics. He says that tobacco decreases in a marked degree the sexual power, the organs becoming relaxed and shrivelling in proportion to the amount of tobacco used. That is a basis for his belief that the immoderate use of tobacco is gradually reducing the natural executive power of statesmanship in man, same being dependent, as is well known, upon abundant sex force.

To accurately ascertain the ill effects of tobacco upon posterity from a physical standpoint, so that there can be no occasion for questioning results or ascribing them to other causes, a series of experiments might be performed upon the lower animals. For instance, a young male could be subjected to the fumes of a lighted cigar or pipe a certain period each day in such very limited quantities that it would not kill him; a female also should be placed in the cage so as to inhale the emanations from the skin and lungs of the male, but to get none of the fumes of the tobacco, the object of the experiment being to ascertain the effects upon offspring when the male only is subjected to the tobacco smoke; she

should become impregnated, the two remaining in the cage until she had ceased to nourish her young, if the experiment be performed upon mammals. The important facts as to the birth rate, loss of fœtal life, if any, manner of delivery of the young, their physical vigor, brain formation and length of life could then be noted; and the same information should be obtained concerning animals that had lived normally.

Few persons are aware of the injurious effect of drugs upon the unborn child, especially when taken by the mother to destroy fœtal life. It is known that the young of animals develop abnormally if subjected to unnatural conditions. In an experiment with fish eggs which were put in sea water to which a solution containing one part of magnesium and two parts of chlorin had been added, 50 out of 100 formed embryos which were one-eyed monstrosities. Other substances, such as alcohol, ether and chloroform were tried and gave like results. When alcohol was used, the embryos manifested almost every gross abnormality known to exist in the brain, and the spinal cord also was defective. Could not similar irregularities arise in human offspring if they are allowed to develop under unnatural conditions such as are induced when the mother takes drugs to destroy the prenatal life? There is reason to think so, since physicians state that anything having a morbific (disease producing) influence upon the mother will react deleteriously upon the product of

conception, either destroying it or weakening its resisting powers. The fœtus or embryo gets its nourishment from the mother's blood, and since experiments have proven that certain drugs injected into the fœtal organism were eliminated by the mother, showing that they traversed the placenta (through which the unborn child is nourished by the mother) it is reasonable to conclude that they reached, and would affect, the unborn child.

Dr. Rentoul, in his "Race Culture or Race Suicide," contends that a considerable number of children who do not die from abortion are so poisoned that their brain and nervous system are permanently injured, the child being influenced to as great an extent within the uterus as outside of it. He also maintains that cancer in the reproductive organs of woman often occurs because portions of conception left in the system undergo retrograde or degenerative change.

It is natural to look for the cause of congenital degeneracy in bad heredity or alcoholism. However, these are not always prime factors as has been proven in an investigation carried on at the Vineland (N. J.) Institution for Feeble-minded, where 187 families connected with the institution were studied. Out of 343 children born in 60 families of normal heredity, there were 60 feeble-minded; and out of 148 children born in 21 families where the heredity was normal and both parents were non-alcoholics, there were 21 feeble-minded children.

Being convinced that bad heredity and alcoholism are not the only factors bearing on this subject, it may be asked if unnatural conditions attending prenatal life might not be a cause for degeneracy? This may be answered by the statement of Beach, Shuttleworth and Barr, who carefully analyzed the causes of feeble-mindedness and idiocy in 5,430 children and found that agencies acting during pregnancy accounted for 64.85 per cent of feeble-minded children, as against 32.23 per cent during birth, and 2.92 per cent after birth. They do not state what these causes are, but no doubt the use of drugs is one of them, for when the unnatural and forced contractions of a mother's organs to give up the fœtus or embryo are noted, and also that the poisonous drug finds its way into that structure, it is very easy to believe that this arrested cell development would result disastrously to body and brain. Instances have been observed to support this theory. The fact that feeble-minded and epileptic children were seldom the first born of their parents forcibly impressed C. J. Bayer, author of "Modern Researches," and caused him to form the opinion that often mothers, after having given birth to two or three children, and not desiring more, would take drugs to destroy the fœtal life; and that when their purpose was not accomplished, degenerate children would be born. He had many private interviews with mothers of feeble-minded and epileptic children, and some of them confessed endeavoring to

produce abortions; and the statements also of practising physicians and superintendents of institutions for the feeble-minded and epileptics confirmed him in this opinion. This is a very delicate subject on which to approach people, many of whom most persistently deny the truth, but enough information was gathered by Bayer and is being collected by other investigators to cause people to think and observe on this most important question.

The researches and investigations carried on through Carnegie Institute are very valuable, also those of the American Genetic Association, to learn to what extent physical and moral traits and diseases are transmitted. But two additional things must be done if degeneracy would be prevented from getting a foothold in this country; first, the true causes for the beginnings of disease and deterioration must be ascertained; and, secondly, every possible means must be employed to prevent those evil forces from working.

The crime of fœticide is a disgraceful blot upon so-called civilization. The ancient Romans are condemned for their practice of infanticide, but modern races hold no higher regard for life, in the slaughtering of unborn infants. This is equally a crime against life, and no doubt it is more far-reaching in its results for evil to humanity than the former, for if the mother is not successful in her attempts to destroy the unborn, she will stamp upon its mind, through the law of maternal impressions, the desire

to kill, which may go with him all through life. If the 860 cases of homicide and the 1,813 cases of suicide which occurred in Chicago during the quadrennium from 1907 to and including 1910, could be traced back to predisposing causes, no doubt they would be found in the prenatal life of the individual in many instances when the mother tried by various methods to destroy the life developing within her body. However, the mother is not the only one who is responsible for this murderous instinct; often the father is an equal partner in the crime, for he may have forced motherhood upon her against her reasonable wish and at a time when she felt she could not assume its burdens, or he may have constrained the wife to refuse maternity from his own dislike to accept his paternal responsibilities or support a child.

Young people should be impressed with the truth that the sublimest thing in all the world is human life. Instruction in home and school will fail in its purpose if the ethical phase of sex and reproduction is neglected or given secondary place. In all such teaching there must be emphasized the sacredness of life, the responsibility of conferring life upon another, and the duty and privilege of cherishing that life in every way.

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CHAPTER VI

PRENATAL NUTRITION AND ENVIRONMENT

"When Breeds are in the making, everything is worth while."—*Kipling.*

The study of Eugenics will be of little practical benefit to humanity unless it is considered from the positive, as well as from the negative standpoint. It is well to know how to avoid having inferior offspring, but it is equally important to know how to produce superior children. Doubtless everybody admits that there must be wise training if desired results are to be obtained, and it is generally conceded that this training must begin early. One authority of prominence has said that if he could have a child the first seven years of its life, he could make of the boy or girl anything he wished. Another writer has said: "Begin to teach the child when its grandsire is a baby," which is equivalent to saying that the education and training which persons receive show results in their children and grandchildren.

But perhaps some one raises the question, "Are acquired characteristics transmissible? Can prospective parents who have thoroughly and systemat-

ically disciplined themselves, physically, mentally and morally, transmit to their offspring the traits or tendencies which they have developed?" It seems reasonable to suppose that they have this power, it being simply a phase of heredity, the tendency of like to beget like. However, often it is very difficult to distinguish definitely between transmission of acquired and inherent characteristics; neither is the line clearly drawn between the transmission of acquired characteristics and the power of maternal impressions. But illustrations are seen in instances where special physical training has been taken by men who desired to fit themselves for parenthood before the initial of a new life took place, the effect being that the children, even as babes, manifested great strength of muscle and vigor of body. Also children of unusual talents have been born of parents who have put themselves through a systematic course of instruction along specific lines of study, the effect being most pronounced when the mother continued the training during gestation.

The power of this factor in heredity is doubted by some persons who maintain that the reproductive cells found in the new-born infant contain at that time everything that they ever will contain; in other words, the child is the outgrowth of the germ plasm just as it is found in its father and mother at their birth. But it must be remembered that the reproductive cells or germ plasm must have nourishment, which it receives through the blood of the

individual. If that supply of blood be correct in quantity and quality, the reproductive cells will be well nourished; but if the nourishment be poor, the germ plasm will result in inferior offspring. This fact has been demonstrated in animals. In one instance, an experiment was performed with silkworms, and three generations were dwarfed in size on account of lack of feeding of only the first brood of larvæ, the moths of succeeding generations being larger and resuming their normal appearance.

The above shows the effects of different supplies of nutrition on the progeny of animals, and it seems reasonable to suppose that similar results will be noted in the human race. When an individual habitually takes physical culture exercises, his muscular system is gradually built up because of the improved quantity and quality of blood in his body; and it is easy to believe that the germ plasm in his body will be increased in vigor because of better nourishment which it also receives through this blood; and that, as his mind directs the flow of blood and life force to certain muscles in his body causing them to develop, so it also has the power to direct the flow of blood to the potentialities of those muscles in his germ cells, making possible strong and healthy muscles in the offspring. Also it is easy to believe that if a certain organ is not used at all, the effect of that non-use will be perceived in the offspring, because that potential organ existing in the germ cell did not receive its proper

nourishment. This belief would seem to be confirmed by the fact that species of fish living in caves have eyes that are atrophied (become useless), although they have come from fish with well-developed eyes. In planning for the perpetuation of the race, God ordained the law of natural selection, or the survival of the fittest, extending that selection to include traits of character, physical, mental and moral; the traits which are strongest, most vigorous, and greatly exercised, being the ones that are handed down from generation to generation; and those that are weak and seldom used, becoming extinct in the species.

Only the physiological aspect of the question has been considered, but it is well to remember that man has a mind as well as body; he has a psychic as well as a physical nature which must be nourished and maintained. As the blood builds up the physical, so the thoughts build up the psychic in the individual; his mind power is determined by his thoughts, ambitions, purposes and ideals. If he is giving himself special mental training, his blood and life force will go to the areas in the brain represented by the special traits which are being called into action. It is reasonable to suppose that his blood and life force will be directed also to the potentiality of those traits in his germ cells, making possible the healthy activity of traits in the offspring. This fact has been demonstrated in different species of animals. Professor Elmer Gates, at Chevy Chase,

Washington, D. C., who has obtained world-wide fame because of his psychical and physiological experiments upon the lower animals and man, says that he trained four generations of guinea pigs in using their powers of sight, and the progeny of the fourth generation were born with a larger number of brain cells in the visual areas than any guinea pigs whose ancestors had not had the training. He has formed the conclusion that mental activity creates in mental organism certain structures transmissible to their offspring, and demonstrates the transmission of acquired characteristics. This view is in harmony with that of Herbert Spencer, who says that change of function produces change of structure and these changes of structure are inherited. Darwin said that the different species have been modified not only through natural selection but in an important manner through the inherited effects of the use and disuse of parts. Some scientists would have us believe that all progress in life has been brought about by natural and artificial selection, and that no such thing is possible as the transmission of acquired characteristics. Such an eminent authority on scientific subjects as Dr. David Starr Jordan, although not a firm believer in this phase of heredity, yet concedes the difficulty of explaining to any satisfaction species forming or evolution without the help of this factor. Ribot, on commenting upon the instinct in the English woodcock of the fear of man and how it had increased

by its transmission through several generations, says: "It is not for us to inquire here how these acquired or modified instincts are produced. We have only to ask whether they are hereditary. Experience answers in the affirmative." Luther Burbank, whose remarkable success with plants renders him well able to speak on the subject of life and reproduction, believes so strongly that acquired characteristics can be transmitted that he defines heredity to be "the sum of all the effects of all the environments of all the past generations on the responsive, ever-moving life forces."

However, Weismann and his followers claim that characteristics which have been built up during the life of an individual can not be transmitted to offspring; that what a person attains for himself or herself has no effect on the reproductive cells, and hence no effect on offspring. He believes that the greatest cause for physical and mental variation in individuals is in the fusion of germ cells of the parents. If this be true, the question may be asked why there are such dissimilarities in character between members of the same family, all coming from identically the same germ plasm in father and mother. And when they say that these differences are caused by variations in the germ plasm, it may be asked if these variations are not caused by the influence of the parents' surroundings and thought-life upon their reproductive cells. Thought is the mightiest thing in the Universe and well may it be

believed that it is sufficiently powerful to take hold of an individual's whole being, his life-giving faculties included; the differences in character between members of the same family being due to different thoughts, purposes and ambitions existing in the minds of the parents before the conception of these children. Everything visible to man is the product of mind. The picture of the artist; the sonata of the musician; the telegraph; the telephone; the automobile; the airship; all existed in the mind of the individual before they were visible realities; and the child must have existed in the minds of the parents, as well as of their ancestors, before its birth; in other words, it is the product of the thought-life of those who have preceded it, including its parents.

Some authorities disbelieve in this phase of heredity because mutilations, such as the habitual deforming of the feet in Chinese women, are not transmitted from one generation to another. But it must be remembered that the Chinese woman uses her feet; therefore their function is not destroyed; hence also the mutilation does not affect the body, nor reach the germ plasm, but is an influence external to the germ plasm, probably having no more effect upon it than the clipping of the hair of the individual or the cutting of the nails of his fingers. If the bandaged feet were not used, no doubt in time the Chinese women would have deformed feet; or if the injury to the feet resulted in disease, perme-

ating the system so as to reach the germ plasm, the consequences of that mutilation might be seen in the offspring. The reason why an injury is not duplicated usually in the offspring or their descendants is because for countless generations preceding there has been the perfect organ, and it takes a stronger influence than a single mutilation to affect the germ plasm. That a mutilation not affecting the body as a whole is sometimes transmitted from parent to child may be due to the fact that the mother had the picture of that injury stamped indelibly upon her mind during gestation; or because the father, in whose body the injury perhaps was received before the initial of a new life occurred, was highly sensitive to it, and firmly believed it would reappear in his offspring. No doubt the former is the more potent factor.

While mutilations in the individual's body act as an external factor to the germ cells, the emotions which he experiences are an agency which has a most decided influence on the reproductive principle and the physical as well as mental constitution of his offspring. Professor Elmer Gates has demonstrated that evil emotions, such as fear, remorse and anger, create poisons in the blood which tend to retard or stop the growth of the cells of the body; while the good emotions, as peace, joy, happiness, produce secretions which bring about a normal development of those cells. These secretions affect the reproductive cells, as well as the soma cells of

the individual. Therefore, Professor Gates urges parents to put themselves in training and cherish only the right kind of emotions, the inspiring, high-grade feelings, for six months or a year before the initial of a new life takes place, in order that the reproductive cells may be perfectly formed and have in them the foundation for a strong, vigorous constitution in the offspring.

But why should they wait until that time to train themselves? Why should they not early form right habits of thinking and living, so that their offspring may have the richer endowment? Too much emphasis can not be placed upon the necessity of young people making the proper choice of mates in marriage; yet if the production of superior children were dependent upon that one factor, the outlook would be most discouraging to prospective fathers and mothers, for weak traits of character are to be found in all. But when young people learn that by a conscientious endeavor to train themselves, they are thereby training their unborn children, they can feel that there is some hope and joy in parentage; that it is something to which they can look forward with delight and even rapture; then they will be inspired to work hard to attain the best and highest that there is in them, leading the lives that will be not only a blessing to themselves but to their succeeding generations.

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CHAPTER VII

PRENATAL NUTRITION AND ENVIRONMENT (Continued)

"A sweet, new blossom of Humanity,
Fresh fallen from God's own hand to flower on earth."
—*Gerald Massey.*

It is said that a learned body of scientists once sat in conference and decided that it was scientifically impossible for a vessel to cross the ocean by the power of steam, and while the decision was being recorded on the minutes, word was received that a steamship had actually made the voyage across the ocean, and was that moment entering the harbor.

Some scientists who have only the materialistic view of heredity tell us that it is impossible for the thoughts and emotions of the mother during gestation to influence the unborn child. But in spite of their denial and ridicule of facts, the law of maternal impressions during gestation still operates, both for the weal and woe of humanity. Students of heredity who have opportunities for observing family histories declare that they see its results everywhere. Many mothers whose knowledge of Eugenics has come to them since the birth of their children, on analyzing their own thought-life during

the periods of gestation, detect an intimate relation between it and the character of their children. Then again prospective mothers who have received instruction along these lines, and believed in the potency of the law, have made a practical test of it, placing themselves under special training during these highly susceptible periods, in order to give certain desired tendencies of mind and character to their offspring. When they declare, and others can perceive, that their efforts have been successful, it is only fair and just to admit the existence and effectiveness of this law of maternal impressions, or gestative influence, producing results through the child's prenatal nutrition and environment.

If, as Dr. David Starr Jordan says, "Science is human experience tested and set in order," then a woman who is a mother and is able to classify and analyze her experiences, is a true scientist; for it is facts, not theories, with which science deals; and a mother knows the facts of maternity as a man, even though he be a scientist, can not know them. It is for man to stand and wait, while woman has the experience.

Luther Burbank, who is well able to speak on the improvement of the species, in referring to the prenatal period and the importance of throwing around the prospective mother every loving, helpful and ennobling influence, says: "In the doubly sacred time before the birth of a child lies, far more than we can possibly know, the hope of the future of this

ideal race which is coming upon this earth if we and our descendants will it so to be."

Some authorities who do not believe in the power of maternal impressions are fair-minded enough to concede its possibilities, even citing cases to prove the law. Such an one is J. Arthur Thomson, Regius Professor of Natural History in Aberdeen University, and author of a number of scientific works. In his book, "Heredity," after referring to the striking example of this influence narrated in the Bible, concerning Jacob's experience with his father-in-law's flocks and herds, he cites the case of a breeder who had never been able to obtain a particular kind of calf by a certain cow; but, keeping her, through pregnancy, with a heifer of the desired color, he secured the calf he wished. The author also tells how a pregnant woman who had viewed her husband's arm cut open by a falling block gave birth, in spite of the doctor's reassurance to the contrary, to a child that had a mark suggestive of the father's wound, and on the same arm. He then says: "We must remember that for a prolonged period the unborn child is part and parcel of the mother—almost an integral part of herself—and we are beginning to know enough of the influence of mind upon body to make us cautious in dogmatizing as to the possibilities of what Ballantyne finely calls 'the mysterious wireless telegraphy of ante-natal life.'"

Physiologists tell us that the fertilized ovum, the

microscopic bit of protoplasm, contains all that the child will ever be, except what it gains through nutrition and environment. These are known to be most important factors in the child's life after birth. Why are they not of as much importance, or more, before birth?

The unborn child receives its nourishment from the mother's blood. That blood is affected by her thoughts, containing poisons if her thoughts are ill; so that if she becomes very angry, revengeful or morose during the time when any organ in the fœtus or embryo is beginning to develop, her poisoned blood, feeding that organ, will prevent its normal growth and may cause it to be otherwise vitiated. But on the other hand, if she is filled with hope, peace and love, then secretions which are beneficial to the system are thrown into her blood and will help to produce the normal development of the child.

The growth of the child is very rapid during the first nine months of its existence. When fertilized, the ovum is .2 millimetre in diameter, and increases in length the first month 3650 per cent; during the first three months increases in weight 400,000,000 per cent, so that a new-born babe is millions of time heavier than the ovum in which it started; in the next twenty-five years, the adult becomes only about twenty times heavier than at birth. Therefore, it is not a difficult matter to understand why nutrition is such an important factor at this time,

when growth is so rapid, and why the thoughts and emotions of the mother affect in so great a degree the child's development, both of body and brain. No doubt many a person has been personally handicapped throughout life because the mother poisoned her blood, through feelings of anger, despondency or fear, when she was carrying the child beneath her heart.

But that is not all. During the first three months of gestation the child gets its nourishment directly from the mother's blood. Doubtless, then, her mind directs extra supplies of blood in the fœtus to the potentiality of physical organs and brain areas which she exercises most largely. But even in the latter period of gestation, when the child has its own blood and circulatory system—the function of the mother's blood simply being to furnish oxygen and new, clean blood, and carry away waste material from the embryo—it is not unreasonable to believe that she can affect the destination in the embryo of the new supply of blood, by her own thought-life, ambitions, purposes and deeds. Thus a foundation may be laid for either a strong or a weak physical, mental and moral constitution.

The question as to whether a mother can mark her child's body because of fright or some intense longing is an important one, concerning which people have different ideas. That there are instances of this power can scarcely be denied by the unprejudiced observer, nor should it cause wonder

that such is the case when it is considered that the mind is all-powerful, every function and organ in the body being influenced by it. When an intense longing or a cruel fright has been experienced, the image of that longing or fright is so clear and strong as to efface all other pictures from the mind, and to put its impress upon the developing organs in the fœtus or embryo. This phase of maternal impressions simply demonstrates the power of mind over matter, and the peculiar impressionability of the unborn child.

There are some persons who, unless seriously cornered in an argument, deny all belief in gestative influence; admitting, if they must, that they feel justified in so doing, because if the extent of this power were fully known, the prospective mother would be in a ceaseless state of worry and excitement. But they should realize that the same mind power which could mark the child also could prevent its being marked; and that the mother who is strongly impressed by fright or an intense desire, can counteract the evil effects therefrom by entertaining all-absorbing thoughts of a pleasant nature, and giving suggestions to herself that she will not allow her child to be influenced by her disagreeable emotions. This fact also should be known; that there is ever the tendency in nature to produce the perfect; that in the unborn child there is the germ plasm for countless generations of normal form and features; and that it takes more than a single scare

or intense craving to make any effect thereon. Every woman should know these truths concerning this phase of maternal impressions for her own welfare and that of her posterity.

Thus far gestative influence has been considered simply from the standpoint of the physiological, but it should be known that the mother exerts an influence over the mind of the unborn child, as well as upon its body. As soon as conception has taken place, the fœtus with its potential organs of digestion, respiration, circulation, with its brain and nervous system, with its wonderful mind powers, all capable of development and growth, is as truly a human being as it ever will be; and since its psychic nature at this early stage is in existence and probably developing at a rate to correspond with its physical being, it may well be believed that the unborn child will be susceptible to all impressions made upon it in the form of thoughts and emotions of others. And since during gestation, the mother and child are in closest contact and doubtless are *en rapport* with each other, there is every reason for believing that the mother's thought-life has a most decided effect upon the developing mind of the unborn child, giving it tendencies and traits similar to her own. The opposition sometimes raised on the ground that there is no nervous connection between them is scarcely plausible, for no one doubts the power of the mother or of any other individual to influence the child after birth; and if at that time

when there is no nervous connection, why not also before birth? The child beneath the mother's heart is in the environment which she creates for it, by her thoughts, purposes, ambitions, ideals; and feels their effect, even though they be not expressed in words; just as every individual, to a certain extent, has the ability to feel the atmosphere produced by others about him. Perhaps its subjective mind is peculiarly active at this time and can receive impressions from its mother because it has no direct communication with the outside world. In reality the mother wields a wonderful power, either for good or ill, over her unborn child. But the father's influence during this period must not be overlooked, since to such a large degree he may make or mar the happiness of his wife, thereby making possible or impossible a propitious environment for the child.

A writer on "The Sacredness of Motherhood" has justly said: "But let that mother give thanks morning and evening whose creative work of motherhood has been accomplished in an atmosphere of sustaining sympathy, and whose physical strength has never been taxed at the expense of her child.

"These words suggest the paramount obligations of man and husband, his highest duty in the bonds of sacred wedlock. The husband has to bear little of the passive service and continuous burdens which attend parenthood. The wife, who has to bear the long-continued drain on body and soul, prenatal

and post-natal, has an absolute right to all the help which pure love, exhaustless patience and tenderest sympathy can afford. This is due to the child also, who must suffer loss in proportion as these are withheld from the mother. If any husband denies these, or worse still, gives in place of them indifference, neglect, harshness or abuse, he becomes a shame to the name of fatherhood, a disgrace to his sex, an enemy to his own child and a sinner before God. O men, be true to all which the sacredness of fatherhood demands, or enter not its holy temple. If you will be disobedient to these demands, let not your crime poison other lives through unworthy fatherhood."

To the person who believes in the wisdom of God, and has studied His wonderful laws of procreation, the pessimistic idea that He placed the begetting of good offspring beyond the control of humanity, seems most repellent and utterly erroneous. The statement made by Leonardo that God has given all good things to man at the price of labor is as applicable to parenthood as to other phases of life. And when young women, becoming conversant with the laws of their being, make large investments in noble thoughts and purposes, and exercise wise efforts and unflagging perseverance to attain their ideals; and when later on they have the sympathy and loving co-operation of their husbands, who have similar aspirations and likewise work to realize them; then there will be not only a

glorious outlook for humanity, but the beginnings of a glorious humanity.

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CHAPTER VIII

CONTINENCE

"There is no wealth but life; and if the inherent quality of life fails, neither battleships, nor libraries, nor symphonies, nor free trade, nor tariff reform, nor anything else, will save the nation."—*Saleeby.*

"The maximum of life can only be reached by the maximum of virtue."—*Ruskin.*

We look about us and see among the human race "the lame, the halt, the blind," while the animals, wild and domestic, are strong and vigorous. We seek for the cause, knowing that there must be some law or laws of life which the animals obey, that the human race does not. We learn that the animals live close to nature; they are active in the open air, getting sunshine, eating natural foods and breathing large quantities of oxygen; and we believe if mankind did likewise, they would be immeasurably stronger.

But perhaps the greatest factor in producing the strength and vigor of the animals is the following out of their natural inclination to conserve life forces. They live long periods of continence between short mating seasons. The female then exercises her right to determine maternity, and never allows any approach if she is with young. There-

fore there is no wasting of life forces, but resultant offspring always, unless conditions are unfavorable.

Reproduction depletes the organism of much physical energy. This is most strongly exemplified in the case of the drone bee, the May fly and the King Salmon, for they impart life to offspring only at the expense of their individual lives. Since animals living many years and caring for their young have but few offspring, while short-lived animals not caring for their young are very prolific, it would seem that those whose main object is to perpetuate their kind, consume so much energy thereby that they have not enough left for any other purpose, even for their own existence.

Saleeby makes the practical application to man, reasoning that since the energy available by any one is finite, if he or she expends it all upon reproduction, the individual will cease to exist. Human beings are too high in the scale of creation to expend all their energy in the exercise of the race function. They have duties to perform in the earning of a livelihood for their families; in carefully training their children, and in taking their share of responsibility of the work of the world. But also for another purpose should they conserve life forces, that they may have "the more abundant life" to transmit to their offspring.

Perhaps very few people realize what a deleterious effect the squandering of the life principle has

upon the reproductive cells. Mrs. Teats, in her book, "The Way of God in Marriage," relates an interview that she had with an eminent scientist, who, in his laboratory, examined the life principle of certain men both when they had been squandering it, and after a period of continence. In the first instance, the spermatozoa seemed languid, moving about slowly in the liquid. In the second case they were "much stronger, of much larger size, and very active, with normal motive power." This proves that when the life principle is wasted, strong, vigorous germ cells can not be built up. If the germ cells are weak, it can only be expected that the resultant offspring will show a corresponding lack of vigor. Therefore may we not believe that children born of depleted parents will probably be physically feeble, literally "born tired"?

The wasting of life forces has been going on all down the ages, and it is reasonable to conclude that the generations have been thereby robbed of their vitality and vigor, and this may be the chief reason why the civilized human race is cursed with so many weaklings and degenerates, and why few really are strong and healthy.

Is it not reasonable to conclude that by excessive dissipation of force the germ cells may become so weak that they will be incapable of fertilizing the ova, causing sterility in man? It is a well-known fact that women of the street seldom become mothers, the physiological cause being described by

Professor E. B. Wilson in his book, "The Cell in Development and Inheritance." But not only that, incontinence is a factor in causing loss of fœtal life. Dapaul holds that it produces two-thirds of all spontaneous fœtal deaths, while Miquel of Tours puts the rate as high as nine out of ten. Do men and women want to continue on the low plane of existence and thus reap the disastrous results that follow?

It is their privilege to rise above their perverted instincts; to live continently except when they desire to bring a human being into existence, and then by clean thinking and noble living to protect that little one developing within the mother's body, thus insuring it against the awful tendency to sensuality and also bestowing upon it a healthier mind and body than could otherwise be given it. They should rise far higher than the animals that obey only their natural instincts. They should deem it the highest honor God has conferred upon them that they can co-operate with Him in creating life. And as spiritual creatures, capable of thinking, reasoning and loving, they should strive to produce offspring just as clean and strong and superior in every way as it is in their power.

Mankind will be able to do much for human progress when they cherish higher thoughts of life, reverence it in all of its aspects, and learn to consecrate its forces to the sacred purpose of creation. It will not be many years before these lofty prin-

ciples are strongly advocated, for some of our leading authorities are now giving much study to the subject. Luther Burbank, perhaps, has the clearest vision of what these ideals mean to the human race, for in speaking of the work of Mrs. Mary E. Teats (lecturer on Eugenics and founder of the Correspondence School of Gospel and Scientific Eugenics), the very keynote of which is continence, he says: "I am sure that her work is only for good, and my hope is that others may soon learn to follow; in fact, thousands of the most intelligent ones are now following her teachings, and before any great betterment of the human race can be made, her good and true teachings must be generally heeded and followed."

Dr. Prince A. Morrow, who was President of the American Federation for Sex Hygiene, said: "So far as we can apprehend nature's design in the sexual life of humanity, the specific and supreme purpose of the sex function is reproduction—the transmission of life to the next generation."

Dr. C. F. Hodge, Professor of Biology in Clark University, Worcester, Mass., says: "We need sublimation of sex quite as much after marriage as before it." In speaking of the growing tendency to disregard the sacredness of marriage, "and, as the running sore of this abnormal condition we have promiscuity and prostitution," he says: "These latter are but the incidental ills resulting from a bad philosophy of sex and do not tend to thwart the

great stream of racial evolution as do anti-biological practices in the marriage relation itself."

The words of Dr. G. Stanley Hall, President of Clark University, also are pertinent. He says: "The ascendant individual family or stock is the one that refuses to yield in excess to the temptation of the flesh, and the descendants are those whose instincts for selfish gratification preponderate over those of race-conservatism." Can we not conclude that in proportion as they refuse to yield to the temptation of the flesh, developing a firm control of self, in that proportion will they be ascendants? And that those who do not yield in any manner nor in any degree, other conditions being the same, will rise the highest?

Havelock Ellis, a noted English scientist and psychologist, considered by some writers to be the best authority on sex to-day, in speaking of the ancient idea that "children came, and their parents disclaimed all responsibility for their coming; the children were sent by God, and if they turned out to be idiots the responsibility was God's," says: "We have learnt that in this, as in other matters, the Divine force works through us, and that we are not entitled to cast the burden of our evil actions on to any higher power. It is we who are, more immediately, the creators of men. We generate the race; we alone can regenerate the race. . . . Reckless abandonment to the impulse of the moment and careless indifference to the morrow, the selfish grati-

fication of individual desire at the expense of probable suffering to lives that will come after—this may seem beautiful to some persons, but it is not civilization. . . . We possess the power, if we will, deliberately and consciously to create a new race, to mould the world of the future. . . . It is in our power not only to generate life, but, if we will, to regenerate life."

When we consider that for so many centuries God's law of the conservation of life forces has been most flagrantly disobeyed, we understand why humanity is so seamed and scarred to-day. But it need not remain in that condition. Through His laws of reproduction; natural selection; heredity, including the transmission of both inherent and acquired characteristics; and gestative influence, God has most wonderfully provided for the development and ultimate perfection of mankind. And since the mind of man, next to that of God, is the mightiest thing in the Universe, and can attain to whatsoever it desires, it is not unreasonable to believe that some time in the future the race will manifest a superiority of which the keenest imagination of the present day does not dream. As we consider the genius of a Shakespeare, a Faraday, a Darwin; as we admire the master minds that harnessed the forces of steam and electricity and taught us to fly like birds; as we reverence the memory of Queen Victoria, Florence Nightingale and Frances E. Willard, the uncrowned queen; and do honor to the names of

Washington, Lincoln and Gladstone, we ask with Wordsworth:

> "What one is,
> Why may not millions be? What bars are thrown
> By nature in the way of such a hope?"

It is only perverted nature and the abnormal habits of so-called civilization that are in the way of the fulfilment of such a hope for the race. In the past there has been ignorance and "Hitherto the development of our race has been unconscious, and we have been allowed no responsibility for its right course. Now, in the fulness of time, and for some good reason, we are treated as children no more, and the conscious fashioning of the human race is given into our hands. Let us put away childish things, stand up with open eyes, and face our responsibilities."

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